



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,745	03/29/2004	Marty L. Stromquist	2003-IP-012798U1	1690
7590	07/06/2005			
Robert A. Kent Halliburton Energy Services 2600 South 2nd Street Duncan, OK 73536-0440			EXAMINER COLLINS, GIOVANNA M	
			ART UNIT 3672	PAPER NUMBER

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/811,745

Applicant(s)

STROMQUIST, MARTY L.

Examiner

Giovanna M. Collins

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

KS

## **DETAILED ACTION**

### ***Drawings***

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

### ***Claim Objections***

Claims 9 and 11 are objected to because of the following informalities:

Claims 9 and 11 recites the limitation "the heater" in line 1. There is insufficient antecedent basis for this limitation in the claim, as this limitation has not been previously recited.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bross et al. 5,769,165.

Bross discloses a method of stimulating a water sensitive coal bed seam containing methane gas penetrated by a well bore to enhance the production of methane gas therefrom comprising the steps of: (a) contacting and heating the coal bed seam with hot nitrogen gas so that the coal bed in the seam shrinks and forms methane gas flow passages therein; and (b) producing the methane gas through the flow passages (col. 3, lines 1-62).

Referring to claim 2, Bross discloses the coal bed seam is under saturated with low pressure methane gas (col. 3, line 1).

Referring to claim 3, Bross discloses the hot nitrogen gas has a temperature in the range of from about the in situ ambient temperature to about 350F (col. 3, lines 48-60).

Referring to claim 4, Bross discloses the coal bed seam is contacted and heated by pumping the hot nitrogen gas into the coal bed seam at a low rate and pressure sufficient to heat and shrink the coal bed thereby forming the methane flow passages therein (col. 3, lines 4, lines 1-12).

Referring to claim 5, Bross discloses (see Fig. 1) the nitrogen gas is pumped from the surface (at 56) into the coal bed seam.

Referring to claim 8, Bross discloses a casing (16) and perforations (22) extending into the coal bed seam.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-7,9-11,13-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bross '165 in view of Jamaluddin et al. 5,539,853

Referring to claims 6,7,9,13,14,16 and 20 Bross discloses a method of stimulating a water sensitive coal bed seam penetrated by a well bore that is under saturated with low pressure methane gas comprising the steps of: (a) providing a source of nitrogen gas on the surface and pumping the nitrogen gas at a relatively low rate by way of a heater into the plurality of coal bed seams; (b) heating the nitrogen gas by the heater to a temperature in the range of from about the in situ ambient temperature to about 350F so that the nitrogen gas heats the coal bed and causes it to shrink and form enlarged methane gas flow passages therein; and (c) producing methane gas from the coal bed by way of the flow passages (col. 3, lines 1-62). Bross does not disclose the heater is disposed in the wellbore. Jamaluddin et al. teaches that electrical heaters disposed with in a wellbore are well known in the art (see col. 1, line 43-col. 2, lines 65). As one of ordinary skill in the art would be familiar with located an heater downhole it would be obvious to one of ordinary skill in the art at the time of the invention to modify the method disclosed by Bross to locate the heater in the wellbore as taught by Jamaluddin.

Referring to claims 10 and 17, Bross does not disclose coiled tubing.

Jamaluddin teaches (fig. 5) using coiled tubing (at 504) to pump a treatment fluid into a well. Coiled tubing is a well known method of injecting fluids into a well. As one of ordinary skill in the art would be familiar with the use of coiled tubing, it would be obvious to one of ordinary skill in the art at the time of the invention to modify the method disclosed by Bross used coiled tubing as taught by Jamaluddin.

Referring to claims 11 and 18, Jamaluddin teaches the heater is connected to coiled tubing (col. 4, line 34).

Referring to claim 15, Bross discloses a casing (16) and perforations (22) extending into the coal bed seam.

5. Claims 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bross '165 in view of Jamaluddin et al. 5,539,853 as applied to claims 10 and 13 and further in view of Schultz et al. 4,962,815.

Bross, as modified, does not disclose packers. Schultz teaches (fig 2) packers above and below a treatment area to isolate the treatment area. Therefore allowing more treatment fluid to flow into the treatment area. As it would be advantageous to inject as most of the nitrogen into the coal bed seam, it would be obvious to one of ordinary skill in the art at the time of the invention to further modify the method disclosed by Bross to have packer above and below the coal bed seam as taught by Schultz.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gmc

  
David Bagnell  
Supervisory Patent Examiner  
Technology Center 3670